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# News Flash: Desert mistletoe is not a threat to native trees

by: Steve Jones<sup>1</sup>

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## RATHER, WE ARE THE THREAT

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Desert mistletoe<sup>2</sup> is a native plant. It evolved here, and has lived in the Sonoran desert harmoniously for tens of thousands of years. Like white ratany, it is not a true parasite, but a hemiparasite, which means it does its own photosynthesis, and takes only water and a few minerals from its host. Its fruit is an important food source for native birds, and the plant makes a good nesting site and food source for the phainopepla, a native bird known to the native Americans as the “window-wing bird,” because of the male’s prominent white wing patch against a black background. The phainopepla requires this plant in order to survive the winter.



Mistletoe Berries, favored by Phainopepla  
photo by Stan Shebs, Mar 2005, at Wikipedia

Desert mistletoe grows in bean trees: foothill and blue palo verde, ironwood, mesquite, catclaw acacia. (Stunted specimens of mistletoe can sometimes be found in creosote bushes, which are not in the bean family.) As the old bean trees die, young trees and seed-

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<sup>1</sup> Originally released by Steve Jones, November 1999; permission granted 2011 to DAC by the author to republish. Steve has a BS in Botany from ASU, and many years of applied Sonoran Desert fieldwork.

<sup>2</sup> *Phoradendron californicum* Nutt.



lings grow to take their places, if we leave room for them. Desert mistletoe is not a threat to native trees. We are.

Let me bring up a grossly underrated natural law: the Law of Unintended Consequences. Every one of us violates this law every day. We do it especially when we look at the native desert around us, find it wanting, and then seek to change it. We violate it when we remove particular species. We violate it when we call the exter-



**Mistletoe in Foothill Palo Verde**  
photo by Dave Mills

minator. We violate it when we put out millet and sunflower seeds for the birds, which attracts non-native English sparrows and starlings. We violate it when we put out dog food for the coyotes, and alfalfa for the deer. We violate it when we scrape the life off of land that we are not going to use. We violate it when we trim the bottom branches off our native palo verde trees and other shrub-like trees. We violate it when we spray chemicals to keep the “weeds” down – chemicals kill native seedlings, too.



Most of us came here with an aesthetic honed in other places: the farmlands of the Midwest, the downtowns and suburbs of American cities east of the Rockies, the California coast, or, in my case, Midland, Texas. The Sonoran Desert is truly a strange land to most of us when we meet it. Nowhere else do saguaro cacti grow.

Whether you are a fifth generation Arizona rancher or are newly arrived from suburban Chicago, open your eyes to this wondrous land. Don't take rake and saw and sprayer to it. Don't feed the native birds – get out and meet them on their own ground. Watch them with your naked eyes, or with binoculars. Watch what they do, watch how they get their food, watch them bathe in the dust. This is their home as well as ours. They evolved here. Each of them was born here, was nurtured here, will live, and then die here. The same goes for all desert critters, from harvester ant to Gila monster. What we do to “adjust” the desert to our aesthetic affects them directly.

Many people falsely believe that mistletoe kills its host. It does not. For one good reason: if it kills its host, it dies itself. Dead tree, dead mistletoe. As noted earlier, bean trees and mistletoe have lived in harmony for tens of thousands of years. The system is in overall balance. We disturb the balance when we intervene.

Some people refer to mistletoe as a “cancer” which will kill the tree. I used to resist that loaded analogy, yet it has some validity. As animals develop cancers when old or in a weakened condition, individual bean trees can be overloaded with mistletoe when old or in a weakened condition.

The sticky seed of the mistletoe lands on the tree's bark, and sends out a root to burrow into the branch. A young, vigorous tree has enough sap pressure to push out the root. An older, weaker tree has lower sap pressure, and less ability to resist the root. Older, weaker trees thus tend to host more mistletoe.

Does this kill the tree? It can contribute to the death of the tree, yes. It can shorten the life of the tree. But it is rarely if ever the immediate cause of death. Remember, when the tree dies, so does the mistletoe within it. The simplistic statement, “mistletoe kills the tree,” ignores the fact that a dead tree is suicide for the mistletoe.

If you have a particular tree near your house providing shade, or which is otherwise valuable, no one should begrudge you removing its mistletoe. But do not cut off whole tree branches. Mistletoe is a very fragile plant, and can be broken off by



hand, if you don't mind suffering a few jabs from the host tree's defenses. The mistletoe may grow back, in which case you simply break it off again.

I have a palo verde near my back porch from which I remove mistletoe every few years. Not all of it - just the male plants. These are simply left on the ground beneath to provide mulch for the tree. The female plants, which produce berries for the birds, remain.

We can cut out mistletoe, and trim the trees, and feed the birds, coyotes and deer, and throw the system out of balance, or we can strive to have a minimal impact on the native habitat, and try to maintain the balance. Their continued presence depends on us and on our actions. Is that fact worth bearing the occasional offense to our aesthetic ideals?

